

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Use of Spectrum Bands Above 24 GHz For Mobile)	GN Docket No. 14-177
Radio Services)	
)	

REPLY COMMENTS OF T-MOBILE USA, INC.

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T-Mobile USA, Inc. (“T-Mobile”)^{1/} submits these reply comments in response to the comments of other parties on the Fourth Further Notice of Proposed Rulemaking (“*Fourth Further Notice*”)^{2/} in the above-referenced proceeding, in which the Commission seeks comment on proposed changes to the channelization of the 38.6-40 GHz band (“39 GHz band”), the 37.6-38.6 GHz band (“Upper 37 GHz band”), and the 47.2-48.2 GHz band (“47 GHz band”), and on proposed auction procedures for these bands.

I. INTRODUCTION AND SUMMARY

T-Mobile applauds the Commission’s ongoing work to make additional millimeter wave spectrum available for fifth generation (“5G”) mobile broadband. The proposals in the *Fourth Further Notice* – which will facilitate the auction of Upper 37 GHz, 39 GHz and 47 GHz band spectrum – are an important part of that effort. The comments on those proposals reveal general agreement on the issues presented in the *Fourth Further Notice* – standardization of 100 megahertz channel bandwidths and auction mechanisms that will promote access to

^{1/} T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

^{2/} *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, Fourth Further Notice of Proposed Rulemaking, FCC-18-110 (rel. Aug. 3, 2018).

unencumbered spectrum in the 39 GHz band. Parties suggested minor changes and clarifications to the processes that would govern the incentive auction itself and to the proposed pre-auction voucher exchange program to maximize incumbent participation and flexibility. T-Mobile agrees with many of those changes and clarification requests but continues to suggest that the Commission may wish to consider eliminating the pre-auction voucher exchange process which would make moot problems with that process highlighted by T-Mobile and others.

Because there is little material disagreement about the issues presented in the *Fourth Further Notice*, T-Mobile urges the Commission to proceed with the plans announced by Chairman Pai to auction the spectrum it covers before the end of 2019.^{3/} Like others in this proceeding, it also urges the Commission to also include any other millimeter wave spectrum in that auction that the Commission has, by that time, allocated for Upper Microwave Flexible Use Services (“UMFUS”) operations.

II. THERE IS NEAR-UNANIMOUS SUPPORT FOR THE USE OF 100 MEGAHERTZ CHANNELS

In the *Fourth Further Notice*, the Commission proposed to rechannelize the Upper 37 GHz, 39 GHz, and 47 GHz bands from 200 megahertz channels to 100 megahertz channels.^{4/} T-Mobile supports that proposal as a way of simplifying the process of rationalizing the 39 GHz band and to mirror the channel bandwidths adopted across millimeter wave bands and in international standards fora. This proposal generated nearly unanimous support among wireless carriers and their representatives and among equipment manufacturers.^{5/} Only one commenter,

^{3/} *Fourth Further Notice*, Statement of Chairman Ajit Pai (“As part of our strategy to extend U.S. leadership in 5G, we intend to hold a single auction of the Upper 37 GHz, 39 GHz, and 47 GHz spectrum bands in the second half of 2019”).

^{4/} *Id.* at ¶¶ 9-13.

^{5/} *See Comments of AT&T Services*, GN Docket No. 14-177 at 2 (filed Sept. 17, 2018) (“*AT&T Comments*”); *Comments of Verizon*, GN Docket No. 14-177 at 4 (filed Sept. 17, 2018) (“*Verizon*

the Telecommunications Industry Association (“TIA”), expressed opposition.^{6/} TIA asserted that smaller channel blocks will create increased complexity; 5G channels may be up to 800 megahertz wide, and consolidating that amount of contiguous spectrum may prove more difficult with 100 megahertz licenses. It argued that the amount of UMFUS spectrum being made available in the next few years makes efforts to create entry opportunities through multiple licenses unnecessary.^{7/}

While T-Mobile appreciates TIA’s observation that 5G may take advantage of larger than 100 megahertz bandwidths in the millimeter wave bands, the benefits of licensing the Upper 37 GHz, 39 GHz, and 47 GHz bands in 100 megahertz blocks outweighs the potential benefits of licensing the spectrum in wider channels. *First*, as others recognized, the current 39 GHz band plan, in particular, is not optimized for greater than 100 megahertz channels.^{8/} Through the Commission’s auction proposal and a band plan based on 100 megahertz blocks, in many cases existing licensees can have the same level of spectrum holdings post-auction as they do pre-auction with no additional expenditure of funds at auction. Larger bandwidth channels may

Comments”); *Comments of the Competitive Carriers Association*, GN Docket No. 14-177 at 3 (filed Sept. 17, 2018) (“*CCA Comments*”); *Comments of Ericsson*, GN Docket No. 14-177 at 4-5 (filed Sept. 17, 2018) (“*Ericsson Comments*”); and *Comments of Samsung Electronics America*, GN Docket No. 14-177, WT Docket No. 10-112 at 10 (filed Sept. 10, 2018) (“*Samsung Comments*”).

^{6/} *Comments of the Telecommunications Industry Association*, GN Docket No. 14-177 (filed Sept. 17, 2018) (“*TIA Comments*”).

^{7/} *Id.* at 2-9.

^{8/} See e.g. *Verizon Comments* at 4 (“Use of 100 megahertz-wide license blocks rather than the previously adopted 200 megahertz-wide framework will simplify the realignment process”); *CCA Comments* at 3 (“revising the band plan for 39 GHz from 200 MHz channels to 100 MHz channels will further assist with the process of repacking incumbents, given that the majority of incumbents already have 100 MHz holdings in non-contiguous 50 MHz license blocks”); *AT&T Comments* at 2 (“because existing licensees have paired 50 MHz × 50 MHz spectrum blocks, using 100 MHz increments provides better opportunities for a voucher holder to be able to obtain a whole new license, whereas a 200 MHz channelization scheme could leave many with “half” of a license.”); and *Ericsson Comments* at 4 (“100-megahertz channels in the 39 GHz band will better facilitate the repacking of incumbents, which is critical to reducing encumbrances and turning 39 GHz into a 5G band”).

prejudice incumbent licensees or, at a minimum, limit the Commission’s ability to rationalize the band.

Second, as several parties noted, while not all millimeter wave band spectrum is fungible, having a consistent bandwidth across all millimeter wave band spectrum will aid licensees in rationalizing their spectrum holdings and will facilitate secondary market transactions.^{9/} *Third*, creating smaller bandwidth licenses will also promote greater participation by small and rural providers. *Finally*, the Commission’s rules will permit aggregation of multiple 100 megahertz-wide channels and in the auction assignment round, spectrum blocks can be authorized on a contiguous basis, allowing the use of the 5G technologies that TIA notes. Nearly *all* commenters that supported 100 megahertz channels also noted the importance of aggregation.^{10/}

^{9/} See, *AT&T Comments* at 2-3 (“extending that channelization throughout [these bands]—aligns the Upper Microwave Flexible Service (“UMFUS”) regulations and simplifies spectrum management across bands”); *CCA Comments* at 4 (“Further, because the Commission has already adopted 100 MHz channels for other Upper Microwave Flexible Use Service bands and has proposed to do so for the 42 GHz band, CCA encourages the FCC to align the channel sizes for each of these [millimeter wave] spectrum bands to continue to promote efficient use of these bands”); *Ericsson Comments* at 4 (“Moving to 100-megahertz channels as proposed will further harmonize the U.S. Upper Microwave Flexible Use Service policies and facilitate the standardization of equipment throughout the mmW bands. In particular, adopting 100-megahertz channels for these three bands will bring the bands into alignment with the 24 GHz band, Lower 37 GHz band, and the proposed channel size for the 42 GHz band”); *Samsung Comments* at 10 (“Commission should make 100 MHz channels the basic building blocks in the 37 GHz, 39 GHz, 47 GHz bands, and in any mmWave bands licensed under the Part 30 UMFUS rules in the future”); and *Verizon Comments* at 5 (“Verizon supports the 100 megahertz channel size for the Upper 37 GHz and 47 GHz bands as well which, among other things, will provide consistency across Upper Millimeter Wave Flexible Use Spectrum bands”).

^{10/} See, *Ericsson Comments* at 5 (noting that it is “critical” that aggregation be permitted); *Samsung Comments* at 10 (stating that aggregation of channels is important to the development of innovative services); *Verizon Comments* at 5. (“Verizon supports the Commission proposal to permit a licensee to aggregate licenses up to larger channel sizes in any of these bands (e.g., 200 megahertz or 300 megahertz)”; and *AT&T Comments* at 2 (“because the Commission is adopting an auction structure that guarantees contiguity of licenses, the reduction in channel size will not limit bidders’ ability to create licenses that provide larger bandwidth”).

III. THE RECORD SUPPORTS THE COMMISSION’S AUCTION PROPOSALS

A. The Commission Should Consider Eliminating the Pre-Auction Voucher Exchange.

Commenters generally supported the Commission’s proposed auction procedures aimed at rationalizing the 39 GHz band.^{11/} Despite overall support of the proposed auction plan, several commenters sought changes to, or clarifications of, the pre-auction voucher process. T-Mobile’s comments noted that the Commission may wish to consider eliminating this phase of the auction process.^{12/} Indeed, not conducting a pre-auction voucher exchange addresses some of the concerns expressed by commenting parties without reducing the effectiveness of the incentive auction to both rationalize the 39 GHz band and protect incumbent interests.

The incentive auction itself – *without* a pre-auction voucher exchange – would allow incumbents, whether holding unencumbered partial economic area (“PEA”) licenses, rectangular service area (“RSA”) licenses, or a PEA license encumbered by an RSA licensee, to obtain the same result the Commission intends for the pre-auction voucher exchange. They would be able to convert their spectrum holdings into vouchers prior to the auction to be used as credits in the auction or redeemed for cash after the auction. These are all desirable outcomes and eliminating the pre-auction voucher exchange would preserve them while eliminating certain challenges commenters identified.

^{11/} See *AT&T Comments* at 5; *Verizon Comments* at 1; and *CCA Comments* at 4 (“CCA supports the Commission’s proposal for an incentive auction and recognizes the need to make incumbents whole for their existing license holdings”); and *Ericsson Comments* at 6 (noting that eliminating fragmentation is particularly important to support [millimeter wave] 5G product development).

^{12/} See *Comments of T-Mobile USA, Inc.* GN Docket No. 14-177 at 7 (filed Sept. 17, 2018) (“*T-Mobile Comments*”).

In particular, several parties, including CCA,^{13/} and Verizon,^{14/} like T-Mobile, expressed concerns about the Commission's ability to calculate the relative values of pre-auction vouchers. AT&T similarly noted that the pre-auction exchange has the potential "to affect auction outcomes" if the exchange rates are not set correctly, and that "if a pre-auction voucher exchange is created," the Commission must be careful given the risk of "unanticipated, harmful auction interactions."^{15/} While T-Mobile has suggested that the Commission use the 24 GHz auction prices as the basis for the voucher exchange, doing so would merely be a best guess, meaning that some incumbent licensees will receive vouchers that ultimately would be worth less than the MHz-Pops value of the 39 GHz spectrum they hold (as determined in the auction) and others will receive a windfall – vouchers worth more than their current licenses. Eliminating the pre-auction voucher exchange would remove these likely inequities because the Commission would not be required to guess *a priori* the relative value of 39 GHz spectrum licenses. Instead, incumbent vouchers would simply be worth the value determined through the auction.

Eliminating the pre-auction voucher exchange would also allow the Commission to eliminate apparent confusion regarding "fractional vouchers." AT&T asserts that "non-bidders participating in the pre-auction exchange should not be permitted to end up with fractional modified license positions."^{16/} But once incumbent licensees obtain a voucher for their license holdings based on the MHz-Pops associated with the licenses they exchanged – either through participating in a pre-auction voucher exchange, or ideally opting to do so prior to the auction

^{13/} CCA Comments at 5.

^{14/} Verizon Comments at 15 (pointing to uncertainty as to the methodology of calculating exchange rates).

^{15/} AT&T Comments at 6.

^{16/} Id. at 9.

without an exchange – they should have no “license position” at all. Instead, licensees would simply have a voucher that could be used as a credit at the end of the auction or converted to cash based on the license value (MHz-Pops in the PEA where the license was located) determined in the auction.

Indeed, if the pre-auction voucher exchange is retained, T-Mobile agrees with the Commission’s alternative suggestion that it should cancel all of the licenses of exchange participants before the auction in exchange for vouchers.^{17/} The Commission should simply equate vouchers – for full or partial PEAs – with the MHz-Pops value of the vouchers’ associated PEAs as determined in the auction. The vouchers can then be used as a credit for licenses obtained at auction or a cash payment if the credit is not used.

Eliminating the pre-auction voucher exchange would similarly allow the Commission to avoid addressing whether incumbents should be permitted to trade vouchers up or down. AT&T^{18/} and Verizon^{19/} both noted complexities involved in “fractional voucher” trading, and CCA warned that the voucher trading could be abused to increase spectrum consolidation.^{20/} That risk is highlighted by Verizon’s suggestion that incumbent licensees be permitted to freely

^{17/} *Fourth Further Notice* at ¶ 37. T-Mobile proposes that an incumbent that participates in the pre-auction voucher exchange be required to convert *all* its licenses to vouchers, in order to promote the elimination of partial licenses, which is the primary goal of the pre-auction voucher exchange, in combination with the auction.

^{18/} *AT&T Comments* at 6-10 (detailing its proposal with regards to fractional voucher trading and ‘trading up,’ both generally and specifically with regards to situations in which such trading results in too many vouchers in a given PEA).

^{19/} *Verizon Comments* at 14-15 (noting the concerns with possible inequities involved in incumbents with fractional vouchers, and proposing to permit exchanges that result in fractional vouchers, despite the Commission’s concerns that such exchanges will result in gaming and undermine the goal of the exchange, which is to reduce encumbrances).

^{20/} *CCA Comments* at 5.

aggregate fractional vouchers.^{21/} Allowing an incumbent to “move” its partial vouchers from one PEA to another and freely aggregate vouchers creates the possibility that a bidder could manipulate auction prices and also creates a risk of arbitrage. If unlimited exchanges were allowed, an incumbent holder could obtain a large number of vouchers in an area (in excess of the number of licenses it intends to acquire) and then artificially drive up prices in the PEA to secure an inflated cash-out.^{22/}

These issues could be avoided entirely by – as T-Mobile recommends – simply treating all fractional licenses, whether RSAs or encumbered PEAs, alike through the incentive auction voucher system itself. Licensees would neither be required to “trade up” nor “trade down” and any aggregation of vouchers would occur post-auction, when the value of the vouchers is established. Instead, before the auction, all incumbents that did not wish to be repacked would be deemed to hold vouchers for the MHz-Pops covered by their licenses – the value of which would be determined during the course of the auction based on the prices determined by the underlying PEAs. That value could then be aggregated and used toward purchasing licenses for which they are the high bidder in the auction or redeemed for cash. If a bidder’s voucher value was less than the license winning bid, then it would be required to make an additional cash payment. If a bidder’s voucher was more than its winning bids (*i.e.*, it had “leftover” voucher value), then that excess value would be automatically converted to a cash payment.

^{21/} *Verizon Comments* at 15.

^{22/} To avoid this problem, if the Commission retains the pre-auction voucher program, it should adopt its proposal to allow exchanges that would permit incumbent licensees to obtain vouchers that would equal no more than the value of the next highest integer and no less than the value of the next lowest integer of its current license holdings in the PEA. *See, Fourth Further Notice* at ¶ 34. AT&T highlights other safeguards that the Commission should consider if it adopts the voucher exchange program, in order to prevent incumbent licensees from manipulating the pre-auction voucher exchange process. *See AT&T Comments* at 7-10.

B. Several Commenters Appropriately Seek Clarification or Modification of the Incentive Auction Proposals.

Several commenters proposed clarifications of the Commission's proposals which the Commission should integrate into its final auction design.

First, AT&T's proposal regarding the calculation of the value of an RSA voucher is reasonable.^{23/} Under this proposal, the population covered by an RSA's MHz-Pops value would be determined based on the whole and partial 2010 census tracts within the RSA, with partial census tracts calculated proportionally by land area.^{24/} If the Commission adopts T-Mobile's proposal to eliminate the pre-auction voucher exchange, then this calculation will only be required for the incentive auction portion. Relatedly, there is no need for the Commission to uniquely address PEAs which are nearly complete, as PVT Networks requested.^{25/} As suggested above, the fractional calculation for PVT Networks will lead to a voucher worth nearly the entire amount of the PEA. There is no reason that the Commission needs to even marginally increase the value of that voucher, which PVT Networks can use towards nearly all the purchase price of a full PEA in the incentive auction.

Second, T-Mobile supports several of Verizon's clarifications and suggestions for improving the incentive auction and encouraging incumbent participation –

- The Commission should offer full voucher flexibility to incumbents, allowing them to utilize vouchers from the 39 GHz band to pay for spectrum won in any

^{23/} *AT&T Comments* at 5.

^{24/} *Id.* at 5.

^{25/} *Comments of PVT Networks, Inc.*, GN Docket No. 14-177 at 4 (filed September 17, 2018).

band included in this auction.^{26/}

- Incumbents should be permitted to cash-out without being required to actually participate in the forward auction (by, for example, submitting a form pre-auction relinquishing spectrum rights in exchange for a voucher to be redeemed post-auction). Incumbents that do participate in the forward auction should be permitted to use their vouchers as upfront payments.^{27/}
- The Commission should set opening bids low in order to stimulate demand and avoid failing to meet closing thresholds.^{28/} Low minimum bids would reduce the chances of excess supply and eliminate issues related to the licenses to which vouchers should be applied.^{29/}
- Bidding credits should only be applied to cash payments made by bidders.^{30/}
- If the Commission proceeds to offer the 47 GHz band alongside the Upper 37 and 39 GHz bands, as discussed below, it should treat that spectrum as a separate

^{26/} *Verizon Comments* at 5-6. T-Mobile suggested the same approach in its comments. *See T-Mobile Comments* at 11-2. T-Mobile notes that while Verizon suggests that an incumbent holding a voucher for a full PEA in one market can use that voucher in an “equally valued PEA,” the value of the PEA in each market will only be determined post-auction.

^{27/} *Id.* at 6-7. While using the MHz-Pops value of a voucher for a full PEA can be used as the upfront payment for that PEA, using aggregated partial PEA values obtained in the pre-auction voucher exchange to satisfy upfront payments will be problematic for the reasons noted above and should not be permitted. T-Mobile also recommended that incumbents be permitted to cash-out without participation in the auction. *See T-Mobile Comments* at 12.

^{28/} *Verizon Comments* at 9-10. T-Mobile also proposed that the Commission adopt low opening bids. *See T-Mobile Comments* at 15.

^{29/} The Commission may wish to consider setting opening bids at between 10%-20% of the winning bids in the 24 GHz auction. This approach will not unnecessarily delay the progress of the auction if bid increments are appropriately increased.

^{30/} *Verizon Comments* at 12. T-Mobile supported this concept, noting that bidding credits should only be used to offset any payment obligations. *See T-Mobile Comments* at 14.

“product” with a separate price clock.^{31/}

- Incumbent participation in the forward auction should be conditioned on the incumbent making its spectrum available in the forward auction,^{32/} a proposal no commenter opposed.

While T-Mobile agrees with several of Verizon’s proposals, it does not agree with Verizon’s suggestion that in the event that total auction proceeds are less than the incentive payments, the Commission should first make incentive payments for vouchers representing encumbered licenses.^{33/} Instead, as T-Mobile earlier suggested, all vouchers not used as credits against winning bids should be fractionally reduced.^{34/} Similarly, it disagrees with the suggestion that vouchers may be converted back to licenses post-auction.^{35/} Once a licensee enters the auction or pre-auction voucher exchange and its licenses are converted to vouchers there should be only one of two outcomes – the vouchers can be used as credits against winning bids or redeemed for cash after the auction.

C. CCA’s Concerns Are Unwarranted

Contrary to concerns of CCA, there is no evidence that the Commission’s proposal for an incentive auction and a forward auction poses any greater risk of encouraging greater consolidation than does a traditional auction structure. While CCA fails to explain its precise

^{31/} *Verizon Comments* at 16. T-Mobile noted that while the Commission has not yet addressed this issue, it presumes that the 37 GHz and 39 GHz bands on the one hand and the 47 GHz band on the other, will be the subject of separate clock auctions. *See T-Mobile Comments* at n. 23.

^{32/} *Verizon Comments* at 7. T-Mobile similarly proposed that participation in any phase of the auction would require that incumbents relinquish their spectrum holdings. *See T-Mobile Comments* at 7, 10.

^{33/} *Verizon Comments* at 11. In any case, the calculus of whether total auction proceeds are less than the incentive payments should be made on a nationwide basis, not a PEA-by-PEA basis.

^{34/} *T-Mobile Comments* at 14-15.

^{35/} *Verizon Comments* at 6.

concerns with the use of vouchers, this structure is necessary to promote the licensing of unencumbered spectrum: compensating incumbents for their spectrum and allowing them to buy additional spectrum is crucial to encouraging their participation, which will in turn achieve this goal. CCA's other concerns are similarly unfounded. *First*, it offers no evidence, or even explanation, of its claim that allowing the flexible use of vouchers across spectrum bands risks increasing interference.^{36/} *Second*, T-Mobile and others addressed the risk – which is low – of insincere bidding by incumbents.^{37/}

IV. THE COMMISSION SHOULD INCLUDE ADDITIONAL SPECTRUM BANDS IN ANY UPCOMING MILLIMETER WAVE AUCTION

In his statement attached to the *Fourth Further Notice*, Chairman Pai indicated that he intends for the Commission to auction the 47 GHz band alongside the Upper 37 and 39 GHz bands in the second half of 2019.^{38/} As T-Mobile previously noted, it supports this proposal, as did others^{39/} and no commenters opposed it. Some commenters further suggested that the Commission should consider auctioning additional spectrum in this same auction. In the *Third Report and Order*, *Memorandum Opinion and Order*, and *Third Further Notice of Proposed*

^{36/} CCA Comments at 5.

^{37/} See e.g., Verizon Comments at 6 (noting that “Though insincere bidding remains a theoretical possibility, the decision to auction the 39 GHz and Upper 37 GHz spectrum together presents such a large supply of licenses (24 100 megahertz licenses) that the likelihood of such behavior occurring is greatly reduced.”) As T-Mobile noted in its comments, the proposed clock auction structure further reduces the ability to affect auction prices, since only marginal demand increases the cost of a license in a given PEA.

^{38/} Fourth Further Notice, Statement of Chairman Ajit Pai (“As part of our strategy to extend U.S. leadership in 5G, we intend to hold a single auction of the Upper 37 GHz, 39 GHz, and 47 GHz spectrum bands in the second half of 2019”).

^{39/} See e.g., Verizon Comments at 16-17 (advocating the auction of the 47 GHz band as a separate ‘product’ in the same auction as the Upper 37 and 39 GHz bands); CCA Comments at 2 (“CCA fully supports the Commission’s plan to auction the Upper 37 GHz, 39 GHz, and 47 GHz bands at the end of 2019”); AT&T Comments at 3 (noting its support for a combined auction, provided the inclusion of the 47 GHz band does not delay the auction); and Ericsson Comments at 3 (“Ericsson supports the Commission’s plans to auction the Upper 37 GHz, 39 GHz, and 47 GHz bands in 2019.”).

Rulemaking in this proceeding, the Commission presented plans for the use of the 42-42.5 GHz band under UMFUS rules and noted the “ability to use this band together with the existing 37 GHz and 39 GHz bands” in doing so.^{40/} In response, Ericsson and CCA both argued that the Commission should include this band in its proposed Upper 37, 39, and 47 GHz auction.^{41/}

T-Mobile supports the inclusion of the 42 GHz band in the same auction as the Upper 37, 39, and 47 GHz bands, provided doing so will not delay the auction past the end of 2019. All the reasons that including the 47 GHz band also apply to the inclusion of the 42 GHz band: namely, that the more spectrum offered together, the more efficient the auction will be and the easier it will be for bidders to devise comprehensive strategies for their future spectrum use. Offering large amounts of spectrum together also benefits smaller participants, encouraging competition and innovation. The Commission should also include in this auction any other spectrum bands the Commission is currently considering (or should consider) for UMFUS operations, including the 25.25-27.5 GHz, 31.8-33.4 GHz, and 50.4-52.6 GHz bands, so long as adding those bands does not delay the auction of the Upper 37 GHz, 39 GHz and 47 GHz bands.

V. THE COMMISSION SHOULD REJECT ADDITIONAL REIMBURSEMENT REQUESTS

Through the incentive auction component of its proposal, the Commission will compensate incumbent licensees in the 39 GHz band insofar as these entities choose to relinquish their spectrum rights; if they choose to retain those rights, they can be repacked into the post-auction band. This is the correct approach to rationalizing the 39 GHz band. Proposals to

^{40/} *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Third Report and Order, Memorandum Opinion and Order, and Third Further Notice of Proposed Rulemaking, FCC-18-73 at ¶ 52 (rel. Jun. 8, 2018).

^{41/} *CCA Comments* at 3; *Ericsson Comments* at 3-4 (noting that its use with the Upper 37 and 39 GHz bands means it could even be included in the same ‘product group’ as those bands).

expand the category of covered incumbents to include secondary users of the band, as advocated by Diversified Communications, Inc.,^{42/} should be rejected.

Secondary users are, by their very nature, subordinate to primary users, and their continued use of the spectrum is conditional on non-interference with primary users. For the 39 GHz band, users like the local television transmission service are secondary to current incumbent licensees, and will remain secondary to any new licensees which result from the proposed auction. Secondary users are not entitled to any compensation as a result of changes in primary users' operations -- that is the foundation of secondary use status. There is no need for the Commission to utilize the incentive auction structure to reclaim their spectrum rights, or to pay for their repacking after the auction.

Diversified notes that the broadcast incentive auction repacking process now includes reimbursement of repack expenses for some low-power TV and TV translator stations, which are also secondary users.^{43/} But Diversified's example precisely demonstrates the flaw in its request. In its original repack planning, the Commission specifically declined to reimburse or otherwise provide funds to secondary TV band users because of their secondary status,^{44/} only doing so upon specific Congressional directive years later.^{45/} Because there has been no similar Congressional directive in this case, similar treatment is not required.

^{42/} *Comments of Diversified Communications, Inc.*, GN Docket No. 14-177 (filed September 17, 2018).

^{43/} *See LPTV, TV Translator, and FM Broadcast Station Reimbursement; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking and Order, MB Docket Nos. 18-214 and 12-268, FCC 18-113 (rel. Aug. 3, 2018).

^{44/} *See Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Report and Order*, 29 FCC Rcd 6567 at ¶ 352 (2014).

^{45/} *See Consolidated Appropriations Act 2018*, Pub. L. No. 115-141, div. E, tit. V, § 511.

VI. CONCLUSIONS

T-Mobile commends the Commission for its continued efforts to make millimeter wave spectrum available for 5G use. In order to maximize the use of these bands for mobile broadband and to speed deployments, the Commission should move forward with its proposed rechannelization of the Upper 37, 39, and 47 GHz bands. It should proceed quickly to an auction of these bands, along with the 42 GHz band based on the proposals in the *Fourth Further Notice* and any other spectrum ready for auction by that time. It should consider eliminating the pre-auction voucher exchange but otherwise keep the auction structure intact, with minor changes and clarifications, as discussed above and in T-Mobile's initial comments, aimed at ensuring the maximum amount of contiguous, unencumbered spectrum can be auctioned simultaneously.

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